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DEQ-Coeur d'Alene Regional Office

December 21, 2001

**Potlatch** 

Potlatch Corporation Resource Management Division Idaho Region

St. Joe Area Woodlands P.O. Box 386 St. Maries, Idaho 83861-0386 Telephone (208) 245-4146 Fax (208) 245-6421

State of Idaho Division of Environmental Quality 2110 Ironwood Parkway Coeur d'Alene ID 83814-2648

Attn: Kreg Beck

Re: Avery Landing Remediation and Project Schedule

Dear Kreg:

The Avery landing monthly well monitoring from November 2000 through October of 2001 is attached for your review.

We purchased a "new" oil/water interface meter manufactured by HERON INSTRUMENTS to accurately measure product depth in the wells for the twelve month monitoring period.

The product thickness measured in older wells (EW's, HC's and MW's) over the past twelve month period shows "less" product thickness than previously measured in the wells.

During the monthly well monitoring the St. Joe River water surface was observed for any visible oil sheen and none was observed.

In the spring of 2001 sixty cottonwood, thirty willow and maple, sixty Ponderosa Pine, and twenty five Spruce trees were planted on the remediation site.

On August 9<sup>th</sup> and 10<sup>th</sup>, 2001 the St. Joe Oil Company removed 1,290 gallons of stored oil product to the Potlatch Corporation, St. Maries Complex boilers for disposal. This stored oil was extracted by our original remediation system that operated from 1994 through 2000. We filed a "Notification of Regulated Waste Activity" with the environmental Protection Agency to comply with section 3010 of the Resource Conservation and Recovery Act (RCRA). Our EPA I.D. number is IDR000200105.



Potlatch Corporation Resource Management Division Idaho Region

**Avery Landing Remediation and Project Schedule Page 2** 

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The Avery Landing Remediation System has been installed for over a year and is functioning as designed. The remediation has effectively stopped the oil product from entering the St. Joe River.

For the next five years (2002-2006) we propose to monitor the existing wells once per year during the month of August or September. In the event measurable oil product of 0.05' or greater is observed in the six 36 inch collection wells, we will use absorption pads to collect and remove the oil from the wells. We will also monitor the St. Joe River for any sign of oil sheen on the water surface and ensure that vegetation is established in accordance with our corrective action plan.

Kreg, if you have any questions feel free to call me at my St. Maries office.

Sincerely,

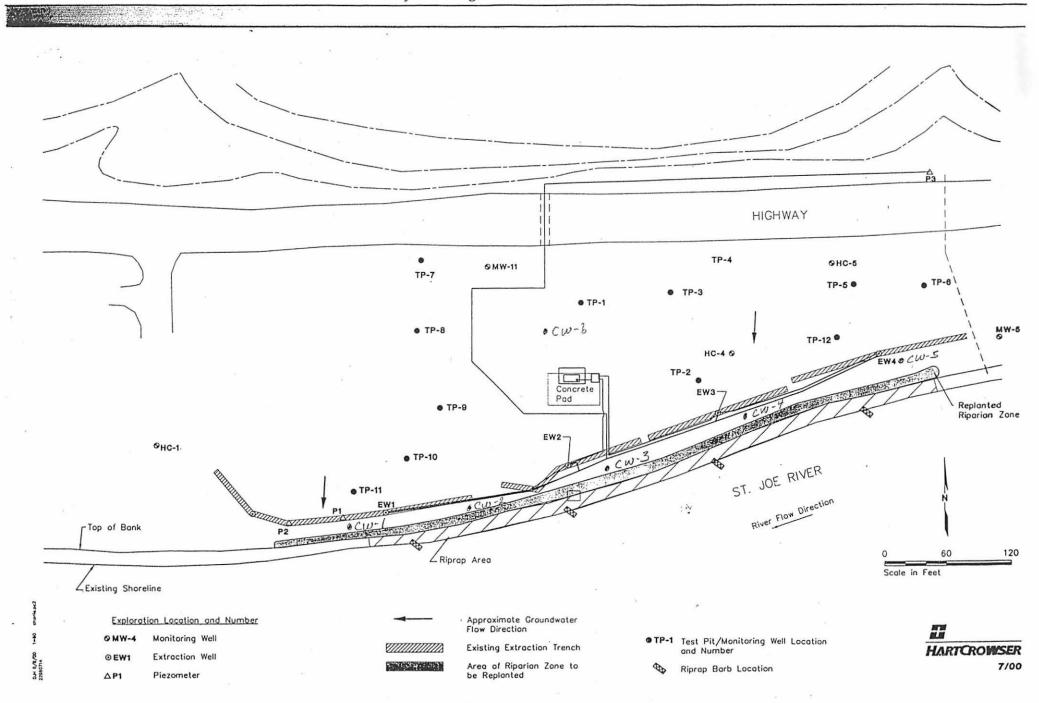
Norm Linton Area Manager

NL: br

CC: Greg Weigal - U.S., EPA, Boise

Chip Corsi - IDFG, CDA

Mike McAllister John Emery Greg Rapp



Monitoring		Dept to Oil	Dept to	Product	
Location	Date	Product	Water	Thickness	Comments
Location	Date	Product	Water	THICKIESS	Comments
CW-1	11/08/00		14.51	_	To water - no oil
CVV-1	12/04/00	<u>-</u>	13.92		To water - sheen
	01/16/01	<u>-</u>	13.82		Depth to water light sheen
	01/16/01	-	13.46		To water - light sheen
		-	13.85	-	To water - light sheen visible
	03/16/01	-	13.70	_	To water - sheen
	04/18/01	-		-	To water - steen
	05/15/01	-	10.58	-	_
	06/20/01	-	13.21	-	To water - light sheen visible
	07/24/01	-	14.12	] -	To water - light sheen visible
	08/21/01	-	14.43	-	To water - light sheen present
·	09/28/01	-	14.69	-	To water - light sheen
	10/31/01	-	13.75	-	To water - light sheen (15.7 to bottom)
CW-2	11/08/00		15.31		To water - oil not measureable - sheen
CVV-Z		-	14.74	_	To water - sheen
	12/04/00	-		_	To water - light sheen
	01/16/01	-	14.62	-	1
	02/15/01	-	14.30	-	To water - light sheen
	03/16/01	-	14.68	-	To water - light sheen
	04/18/01	-	14.45	-	
	05/15/01	-	11.41	-	To water - light sheen visible
į	06/20/01	-	14.01	-	To water - light sheen
	07/24/01	-	14.95	-	To water - light sheen visible
	08/21/01	· -	15.23	-	To water - light sheen/rust
	09/28/01	-	15.41	-	To water - light sheen
	10/31/01	-	14.55	-	To water - light sheen (15.85 to bottom)
0144.0	44/00/00		42.20		To water me all
CW-3	11/08/00	-	13.30	-	To water - no oil
	12/04/00	-	11.81	-	To water - very light sheen
	01/16/01	-	12.35	-	To water - light sheen
	02/15/01	-	12.10	-	To water - light sheen
	03/16/01	-	12.73	-	To water - light sheen
	04/18/01	-	12.35	-	To water - sheen
	05/15/01	-	8.80	-	To water - light sheen
	06/20/01	-	11.87	-	To water - light sheen
	07/24/01	-	12.81	-	To water - light sheen visible
	08/21/01	-	13.18	-	To water - light sheen visible
	09/28/01	-	13.38	-	To water - light sheen, some rust
	10/31/01	-	12.40	-	To water - light sheen (16.1 to bottom)
0147.4	44/00/00		40.54		T
CW-4	11/08/00	-	12.51	-	To water - sheen visible
	12/04/00	-	11.20	-	To water - sheen
	01/16/01	-	11.56	-	To water - light sheen
	02/15/01	-	11.52	-	To water - light sheen
	03/16/01	- -	11.68	-	To water - very light sheen
	04/18/01	-	11.50	-	To water - sheen
	05/15/01	-	8.24	1 -	To water - very light sheen
	06/20/01	-	10.93	-	To water - light sheen
	07/24/01	-	11.89	-	To water - rusty sheen present
	08/21/01	-	12.40	] -	To water - rusty sheen present
	09/28/01	-	12.71	-	To water - rusty sheen
	10/31/01	-	10.83	-	To water - clean (15.60 to bottom)
0141.5	44100:				
CW-5	11/08/00	-	12.85	-	To water - oil not measurable - sheen
	12/04/00	-	11.91	-	To water - no measurable oil - sheen
	01/16/01	- '	11.81	-	To water - light sheen
İ	02/15/01	-	11.41	-	To water - light sheen

Monitoring		Dept to Oil	Dept to	Product	T
Location	Doto	Product	•		Comments
Location	Date	Product	Water	Thickness	Comments
	20110104		44.00		<u> </u>
0.44.5	03/16/01	-	11.83	-	To water - very light sheen
CW-5	04/18/01	-	14.18	-	To water - sheen
(Continued)	05/15/01	-	8.50	-	To water - light sheen
	06/20/01	-	11.10	-	To water - very light sheen
	07/24/01	-	12.41	-	To water - light sheen
	08/21/01	-	12.83	-	To water
	09/28/01	-	13.39	-	To water - very light sheen
	10/31/01	-	11.78	-	To water - very light sheen (15.30 to bottom)
			40.04	i	
CW-6	11/08/00	-	18.21	-	To water - sheen
	12/04/00	-	17.35	-	To water - sheen
	01/16/01	-	17.33	-	To water - light sheen
	02/15/01	-	17.11	· -	To water - light sheen
	03/16/01	-	17.26	-	To water - light sheen
	04/18/01	-	17.14	-	To water - sheen
	05/15/01	-	14.11	-	Visable thin layer of oil
	06/20/01	-	16.70	-	Visable thin layer of oil
	07/24/01	-	17.68	-	To water - visable thin layer of oil
	08/21/01	-	18.13	-	To water - visable thin layer of oil
	09/28/01	-	18.42	_	To water - thin layer of oil
	10/31/01	-	17.33	-	To water - thin layer of oil (19.70 to bottom)
EW-1	11/08/00	-	15.91	-	To water - sheen visible
	12/04/00	<b>-</b> '	15.30	-	To water - light sheen
	01/16/01	-	15.39	· <u>-</u>	To water - light sheen
	02/15/01	-	15.08	-	To water - light sheen
	03/16/01	-	15.45	_	To water
	04/18/01	<u>-</u>	15.45	<b>_</b> .	To water - light sheen
	05/15/01	-	12.21	-	To water
	06/20/01	-	14.84	_	To water
	07/24/01	_	15.68	_	To water
	08/21/01	_	16.06	_	To water - light sheen
	09/28/01		16.34		To water - light sheen
	10/31/01	_	15.38	_	To water - light sheen
	10/31/01		10.50		10 Water - light sheen
EW-2	11/08/00	_	15.25	_	To water - heavy sheen
	12/04/00	14.19	Can't determine	_	Can't determine oil depth - too thick
	01/16/01	14.60	Can't determine	_	To oil - very thick
	02/15/01	14.34	14.36	0.02	Oil present
	03/16/01	14.75	14.78	0.03	Oil present
	04/18/01		Can't determine	0.03	
		14.60		0.04	Couldn't clean probe
	05/15/01	11.53	11.54	0.01	Oil present - thin layer
	06/20/01	14.10	Can't determine	-	To oil
İ	07/24/01	14.95	15.00	0.05	To oil
	08/21/01	15.34	15.38	0.04	Oil present
	09/28/01	15.62	15.67	0.05	To oil
	10/31/01	14.62	14.65	0.03	To oil
E)4( 2	44/00/00	40.40	40.50	2.22	
EW-3	11/08/00	16.42	16.50	0.08	Oil present
]	12/04/00	14.42	Can't determine	-	Can't determine oil depth - too thick
	01/16/01	14.80	Can't determine	-	Oil present - can't get thickness
	02/15/01	14.50	Can't determine	-	Oil present
1	03/16/01	14.77	14.80	0.03	Oil present
İ	04/18/01	14.60	Can't determine	-	Couldn't clean probe
	05/15/01	11.38	11.42	0.04	Oil present
	06/20/01	14.13	14.17	0.04	Oil present

Manitarina		Dont to Oil	Dont to	Product	· · · · · · · · · · · · · · · · · · ·
Monitoring		Dept to Oil	Dept to		0
Location	Date	Product	Water	Thickness	Comments
	07/04/04	45.05	45.44	0.00	
	07/24/01	15.05	15.11 15.58	0.06 0.06	Oil present
	08/21/01	15.52 15.81	15.89	0.08	Oil present To oil
EW-3	09/28/01	14.60	14.64	0.08	To oil
(Continued)	10/31/01	14.00	14.04	0.04	10 011
EW-4	11/08/00	13.75	13.77	0.02	Oil present
EVV-4	12/04/00	12.64	12.65	0.02	Oil present
	01/16/01	12.74	Can't determine	0.01	Thick oil present
	02/15/01	12.74	Can't determine	-	To oil
	02/15/01	12.42	Can't determine	_	To oil - very thick
	04/18/01	11.35	Can't determine	-	Couldn't clean probe
	05/15/01	9.01	9.02	0.01	To oil - thin layer
	06/20/01	11.58	11.59	0.005	Oil present
	07/24/01	12.90	12.93	0.003	Oil present
	08/21/01	13.62	13.64	0.03	Oil present
				0.02	To oil
	09/28/01 10/31/01	14.00	14.02 12.57	0.02	To oil (very thick)
	10/31/01	12.55	12.57	0.02	10 on (very unck)
HC-1	11/08/00				Could not find
Inc-I	12/04/00	-	-	-	Could not find
	01/16/01		~	-	Could not find
		-	_	-	Could not find
	02/15/01	-	42.70	-	To water - no oil
	03/16/01	· <b>-</b>	12.70	-	
	04/18/01	-	12.50	-	To water - clean
1	05/15/01	-	9.72	-	To water - some red rust
	06/20/01	-	12.10	-	Water - light red rust
	07/24/01	-	12.91	-	To water - clean
	08/21/01	-	13.27	-	To water - clean
	09/28/01	-	13.45	-	To water - light red rust present
	10/31/01	-	12.63	-	Red rust present (17.85 to bottom)
HC-4	11/08/00	13.68	14.46	0.78	Oil present
110-4	12/04/00	12.97	Can't determine	0.70	Can't determine oil depth - too thick
1	01/16/01	12.81	Can't determine	_	Oil present
1	02/15/01	12.51	Can't determine	-	Oil present
	03/16/01	11.91	Can't determine	<del>-</del> .	To oil
Į į	04/18/01	12.20	Can't determine		Couldn't find probe
	05/15/01	10.48	Can't determine	-	Oil present
	06/20/01	12.15	12.34	0.19	Oil present
	07/24/01	13.07	13.38	0.13	Oil present
	08/21/01	13.55	14.12	0.57	Oil present
	09/28/01	13.80	14.61	0.81	Oil present
	10/31/01	12.65	13.45	0.80	Oil present (18.13 to bottom)
	. 10/31/01	12.00	13.45	0.60	Oil present (18.13 to bottom)
HC-5	11/08/00	_	18.40	_	To water - no oil
	12/04/00	_	17.63	_	To water - no measurable oil - sheen
]	01/16/01	_	17.55	_	To water - no ill
]	02/15/01	-	17.33 17.28	_	To water - no oil
	03/16/01	_	17.24	_	To water
[	04/18/01	_	16.98		To water - clean
]	05/15/01		14.25		To water - clean
1	06/20/01	_	16.80	_	To water - clean
]	07/24/01	_	17.88	• •	To water - clean
}	08/21/01		18.40	<u>.</u>	To water - clean To water - clean
	09/28/01	<u>-</u> 	18.72		To water - clean
	10/31/01	. <del>-</del>	17.46	-	To water (23.05 to bottom)
	10/31/01	<u>-</u>	17.40	L	ויט שמנכו (בט.טט נט טטננטווו)

Monitoring		Dept to Oil	Dept to	Product	1
Location	Date	Product	Water	Thickness	Comments
Location	Date	Product	vvaler	Tillckiless	Comments
MW-5	11/08/00		10.80		To water - no oil
141AA-2	12/04/00	-	9.93	_	To water - no oil
MW-5	01/16/01	_	9.70		To water - no oil
(Continued)	02/15/01	_	9.35	_	To water - no oil
(Continued)	03/16/01	_	10.04	_	To water
	04/18/01	_	9.28		Clean
	05/15/01	_	6.51	i .	Clean
	06/20/01		9.20	_	Clean
	07/24/01		10.40		Clean
	08/21/01		10.97	ì _	Clean water
	09/28/01		11.28	_	Clean water
	10/31/01	_	9.92	-	To water (12.83 to bottom)
	10/01/01			<del>                                     </del>	To value (12.00 to bottom)
MW-11	11/08/00	_	_	_ '	Not tested
	12/04/00	18.40		1 -	Oil to thick - do not test
	01/16/01	17.90	_	_	To oil (thick) - not measurable
	02/15/01	- 17.55	_	_	Can't find - deep snow
	03/16/01	_	_	_	Not tested
	04/18/01	15.75	_		Couldn't clean probe
	05/15/01	10.70	_		Not tested
	06/20/01	_	, -		Not tested
	07/24/01	_	· _	_	Not tested
	08/21/01	_	_	_	Not tested
	09/28/01			_	Not tested
	10/31/01	_		1 -	Not tested
	10/01/01				Two tested
TP-1, 2"	11/08/00	_	20.02	_	To water - no oil
, –	12/04/00	_	19.10	_	To water - sheen
	01/16/01	_	19.16		To water - no oil
	02/15/01	<u>-</u>	18.88		To water - no oil
	03/16/01	_	19.08	_	To water - light sheen
	04/18/01	_	18.85		To water - light sheen
	05/15/01	15.785	15.79	0.005	To thin layer of oil
	06/20/01	_	18.53		To water - light sheen
	07/24/01	_	19.46	_	To water - light sheen
	08/21/01	_	19.95	_	To water - light sheen
	09/28/01	_	20.22	_	To water - sheen present
	10/31/01	-	19.08		Trace of oil (22.41 to bottom)
					(22.17 to 20.001)
TP-1, 4"	11/08/00	_	19.75	_	To water - sheen
,, .	12/04/00	18.83	18.84	0.01	Thin layer of oil
	01/16/01	-	18.92	1	To water - no oil
	02/15/01	_	18.63		To water - light sheen
	03/16/01	<u>_</u>	18.82		To water - heavy sheen
	04/18/01	_	18.60	1	To water - heavy sheen
	05/15/01	_	15.63	_	Heavy sheen
	06/20/01	_	18.28	] _	To water - light sheen
	07/24/01	_	19.20	_	To water - light sheen
	08/21/01	_	19.69	_	To water - neavy sneen To water - heavy sheen
	09/28/01	_	19.96	<u> </u>	To water - heavy sheen
	10/31/01	_	18.85	] _	Trace of oil - micro worms (16.98 to bottom)
	10/01/01		10.03	<del></del>	Trace of oil - filloto worths (10.30 to bottom)
TP-2	11/08/00	-	14.95	1	To water - no oil
-	12/04/00		15.37	· -	·
	01/16/01	<u> </u>		-	To bottom - no oil - dry well
	01/10/01	•	15.45		Dry well

Monitoring		Dept to Oil	Dept to	Product	
			Water	Thickness	Comments
Location	Date	Product	vvater	THICKHESS	Comments
	00/45/04		15.35		Dry well
	02/15/01 03/16/01	_	13.33 14.61	-	to water
		15.21	Can't determine	-	Couldn't clean probe
	04/18/01	15.21	12.19	_	To water
TD 0	05/15/01	44.05	14.86	0.01	Oil present
TP-2	06/20/01	14.85	15.40	0.01	Well bottom - sludge no oil
(Continued)	07/24/01 08/21/01	-	15.40 15.40	-	Well bottom - dry trace of oil
	09/28/01	-	15.90	_	well bottom - dry light trace of oil
	10/31/01	_	14.50	-	To water (15.40 to bottom)
	10/01/01				
TP-3	11/08/00	-	16.45	-	Dry well
	12/04/00	-	16.05	-	Dry well
	01/16/01	_	16.10	-	Dry well
	02/15/01	_	16.12	-	Dry well
	03/16/01	_	15.01	-	To water - light sheen
	04/18/01	-	15.80	<u>-</u> ;	To water - light sheen
	05/15/01	-	13.28	-	To water - very light sheen
	06/20/01	<u>-</u>	15.58	· <b>-</b>	To water - oil globs on probe
	07/24/01	_	16.10	-	Well bottom - dry well/clean
	08/21/01	_	16.10	-	Well bottom - dry trace of oil
	09/28/01	_	16.10	_	Well bottom - dry trace of oil
	10/31/01	<u>.</u>	15.20	-	Trace of oil - micro worms present (16.10 to bottom)
			,		
TP-5	11/08/00	-	17.92	-	To water - no oil
	12/04/00	-	1 <b>6.2</b> 7	-	To water - no measurable oil - sheen
	01/16/01	-	16.11		To water - light sheen
	02/15/01	-	15.76	<b>-</b> .	To water - light sheen
	03/16/01	-	15.12	-	To water
	04/18/01	-	15.55	-	Clean
	05/15/01	-	12.73	-	Clean
	06/20/01	-	15.21	-	Clean
	07/24/01	-	16,35	-	Clean
	08/21/01	-	16.86	-	To water - micro worms present
	09/28/01	-	16.98	-	To water - trace of oil
	10/31/01	-	15.63		To water (18.10 to bottom)
	44/00/00		45.00		
TP-6	11/08/00	-	15.00	-	Dry well
	12/04/00	-	14.76	-	To water - no oil
	01/16/01	-	14.62	-	Dry well
	02/15/01	-	14.42	- ,	To water - no oil
·	03/16/01	-	14.13	· -	To water
	04/18/01	-	14.14	-	Clean
	05/15/01	-	11.62	-	Clean
:	06/20/01	-	13.95	-	Clean
	07/24/01	-	14.79	-	Specks of oil
	08/21/01	-	14.95	-	Well bottom - dry trace of oil
ļ	09/28/01	-	14.98	· <b>-</b> ,	Well bottom - oily mud
	10/31/01	-	14.38	-	To water (14.98 to bottom)
TP-7	11/08/00	_	17.30	_	Dry well
l ,	12/04/00	_	17.05	_	Bottom - dry well
	01/16/01	_ `	17.00	<u>-</u>	Dry well
l	02/15/01	_	17.10	_ _	Dry well
ļ l	02/15/01	_	14.73	_	To water - red rust in water
	04/18/01		15.38	-	Clean
	05/15/01		14.36		To water - red rust color
ı l	00/10/01	· -	1 17.50	-	Tro mater - Leg rust color

Monitoring		Dept to Oil	Dept to	Product	
Location	Date	Product	Water	Thickness	Comments
Location	Dute	1104400	Truco.		
	06/20/01	_	16.96	_	Dry well - wet red rust
	07/24/01	_	16.98	_	Well bottom - dry
	08/21/01	_	16.98	_	Well bottom - dry
	09/28/01	_	16.98	_	Well bottom - dry
	10/31/01	_	16.81	_	To water - micro worms (16.98 to bottom)
TP-8	11/08/00	_	17.40	_	Dry well
,	12/04/00	_	16.76	-	Bottom - dry well
	01/16/01	-	16.81	-	Dry well
	02/15/01	_	16.80	-	Dry well
	03/16/01		16.42	_	To water - oil skim present
	04/18/01	-	16.45	-	To water - skim of oil
	05/15/01	_	14.00 ·	_	To water - skim of oil
	06/20/01	_	16.39	_	To water - skim of oil
	07/24/01	_	16.82	-	Well bottom - dry
	08/21/01	_	16.82	-	Well bottom - dry
	09/28/01	_	16.82	_	Well bottom - dry
	10/31/01	-	16.82	_	Dry - clean
TP-9	11/08/00	_	18.41	_	Water - no oil
	12/04/00		17.80		To water - no oil
	01/16/01	_	17.67	_	To water - no oil
	02/15/01	_ '	17.38	-	To water - no oil
	03/16/01	17.35	17.42	0.04	Oil present - very thin oil
	04/18/01	-	17.34	_	Oil present - thin oil
*	05/15/01	14.58	14.585	0.005	To thin layer of oil - micro worms present
	06/20/01	17.05	17.055	0.005	Thin layer of oil
	07/24/01	17.95	17.98	0.03	Oil present
	08/21/01	18.35	18.39	0.04	Oil present
	09/28/01	18.61	18.64	0.03	Oil present - micro worms present
	10/31/01	17.66	17.67	0.01	Oil present (19.25 to bottom)
TP-10	11/08/00	-	18.00	-	Dry well
•	12/04/00	-	17.48	i -	To water - no oil
	01/16/01	-	17.24	-	To water - no oil
·	02/15/01	-	16.96	-	To water - no oil
	03/16/01	-	17.03	-	To water
	04/18/01	-	17.10	-	Clean
	05/15/01	-	14.20	-	To water
	06/20/01	-	16.64	-	To water
	07/24/01	-	17.45	<u>-</u>	To water - micro white worms
1	08/21/01	-	17.50	-	Well bottom - light sludge - oily
	09/28/01	-	17.50	-	Well bottom - dry
	10/31/01	-	16.84	-	To water - micro worms (17.50 to bottom)
TP-11	11/08/00	-	18.00	-	Dry well
	12/04/00	-	17.46	-	To water - no oil
	01/16/01	-	17.23	-	To water - no oil
	02/15/01	-	16.97	-	To water - no oil
	03/16/01	-	17.11	-	To water - very light sheen
	04/18/01	- 1	17.10	-	To water - very light sheen
	05/15/01	-	14.18	-	To water - light sheen
·	06/20/01	-	16.70	_	To water
	07/24/01	-	17.43	-	To water - micro white worms present - no oil
	08/21/01	-	17.58	-	To water - micro white worms present
	09/28/01	-	17.80	-	To water - light sheen present

Monitoring Location	Date	Dept to Oil Product	Dept to Water	Product Thickness	Comments
	10/31/01	-	17.70		To water - micro worms (17.90 to bottom)
TP-12	11/08/00	-	14.76	-	To water - no oil
	12/04/00	-	15.01	-	To water - no measureable oil - sheen
	01/16/01	-	14.83	-	To water - no oil
:	02/15/01	-	14.72	-	To water - no oil
TP-12	03/16/01	-	13.82	-	To water
(Continued)	04/18/01		14.70	-	To water - light sheen
	05/15/01	-	11.60	-	Light sheen
	06/20/01	_	14.26	<b>-</b> .	Very light sheen
	07/24/01	_	15.25	_	Well bottom - sandy sludge with oil
	08/21/01	-	15.25	_	Well bottom - sludge with oil
	09/28/01	_	15.28	_	Well bottom - oil sludge
	10/31/01	-	14.53	-	To water - trace of oil (15.30 to bottom)